THE ROCKEFELLER FOUNDATION

A Review for 1947

BY RAYMOND B. FOSDICK

President of the Foundation

NEW YORK

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Frontispiece: Formal opening of Peiping Union Medical College a quarter of a century ago.

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The Foundation publishes an annual report containing complete statements for the year by the Secretary, the Treasurer and the directors of the various fields of work. It also issues a separate annual report of the work of the International Health Division. Copies of these reports will be sent to anyone applying for them.

THE ROCKEFELLER FOUNDATION

REVIEW OF WORK IN 1947

By Raymond B. Fosdick
President

The Year in Brief

DURING 1947 the appropriations of The Rockefeller Foundation amounted to $23,413,615. This figure, exceeding by nearly $4,000,000 the figure of 1946, represents the largest annual amount appropriated in the thirty-five years of Foundation history. Included in the 1947 total is a single grant of $10,000,000 to the China Medical Board, Inc., for the support of the Peiping Union Medical College. The income of the Foundation from investments during 1947 was $10,011,756. This income was supplemented by a balance of $221,431 remaining from the previous year, by lapses and refunds from previous years amounting to $876,448 and by a transfer from the Principal Fund of $20,000,000.

The Charter authorizes the Trustees to "expend the income and principal of the funds of the Corporation in such manner as in the judgment of the Trustees will best promote its objects." In accordance with this provision the Trustees, since 1913, have appropriated a total of $295,896,340 from income and, in addition, a total of $118,010,728 from capital. The transfer in 1947 of $20,000,000 from the Principal Fund, although only part was appropriated, is the Foundation's largest allocation of capital in any one year.

The highest book value of the Principal Fund was $171,204,624 in 1921. As of December 31, 1947, the book value of the Principal Fund was $118,071,816; the market value, $198,229,909.

The appropriations for 1947 were distributed for the most part in seven major categories, roughly as follows:

Public Health	$ 2,250,000
Medical Sciences	1,500,000
Natural Sciences	1,700,000
Social Sciences	3,000,000
Humanities	1,500,000
General Education Board	1,500,000
China Medical Board	10,000,000

A detailed statement of the appropriations made in 1947 appears at the conclusion of this report, beginning on page 53. Of the money appropriated during the year, including the grants of $1,500,000 to the General Education Board for its program in this country and of $10,000,000 to the China Medical Board, Inc., for its program in the Far East, 39 per cent was for work in the United States and 61 per cent for work in other countries.

Challenge and Response

ALL centuries are dangerous, said Professor Whitehead; and he added: "It is the business of the future to be dangerous." This was written in 1925, and certainly there can be no question of the accuracy of the prognosis as it applies to our generation. The challenge of today's crisis is the most commanding which Western society has ever faced. We have always known that knowledge was a perilous possession, because it could equally well work in the wrong direction; but the knowledge that has been placed in the hands of this age is so supremely capable of misuse—and

misuse could so easily reduce the hopes and monuments of men to drifting dust—that the impact of the challenge finds us confused, uncertain and fearful.

Like all frightened people everywhere and in all ages, our first reaction is physical force, and our instinctive faith is given to military power. Let us grant at once that in this unprecedented crisis a measure of physical force is essential. We do not live in a utopia, and it would be suicidal to act as if we did. Equally suicidal, however, is the assumption that the crisis can be met solely on the level of force, or that mechanisms, power and dollars constitute the essential elements of the solution.

The present is one of the supreme moments of challenge, in which, as Toynbee says, the character of our response determines the chances of survival. The past is littered with the wreckage of nations and empires which tried to meet the crises of their times by physical means alone. Our response today cannot be confined to this lower level. Unless we can rise to greatness and lift our answers to an intellectual and ethical plane, our fate will be the fate, not only of the nations that preceded us in history, but of all species, whether birds or brontosaurs, which specialized in methods of violence or defensive armor.

One of the difficulties in putting our response on a higher level of human searching is our emphasis here in America on the task of raising the material standards of living. In this ambition we have been incomparably successful; our productive and consuming capacity is greater than that of any other country in the world. But the result is that our principal standards are standards of quantity: we have more of everything than anybody else—automobiles, refrigerators, radios, railroads. Consequently our vision is not so much of a world peopled by wise and honorable men as it is of a world in

which "every family has its automobile and every pot its chicken." We have too easily made the assumption that other values would automatically follow our material well-being, that out of our assembly lines and gadgets the good life would spontaneously be born.

One of our leaders recently said that Europe could prosper in the long run only as she adopted what he called the American philosophy of consumption. This uncritical identification of consumption with social value is, of course, not characteristic of this country alone or of this age alone; but the extent of the confusion in America today is disquieting. Although our religion and ethics have long tried to enlighten us, many of us are still only dimly aware that purchasing power is not the measure of a great society, and that wisdom and cultural values are not the inevitable consequences of an increased capacity to consume.

It is, of course, obvious that a solid material foundation is an essential basis for a high civilization; but it is a basis, not a superstructure. Our tendency is to confuse one with the other, to mistake the foundations for the towers and turrets of the new city. There is a spiritual hunger in the world today that is not being satisfied by American exports. "God knows we need food and coal to survive," said a European delegate to Lake Success, "but unless America can take the lead in providing a vital faith, in giving us a song that mankind can sing, all her exports will merely postpone the day of reckoning, and the world will die anyway."

Another aspect of the difficulty which we face in placing on a higher level our response to the challenge of our time, is our superstitious reverence for the physical sciences. They have become sacrosanct—the dispensers of the gifts of life.

The doctrine that "civilization can be bred to greatness and splendor by science" is widely accepted. Even our universities have succumbed to this twentieth century worship of methods which give mastery in the physical world. In contrast with the money available for the humanities and the social studies, far greater sums are today being allocated to the physical sciences by our educational institutions than ever before. From government and business, as well as from college budgets, money in increasing amounts is being poured into the teaching of chemistry and physics. "This is the Century of Science," one characteristic college announcement proclaims, "and we must orient our students to the prevailing interest of their time." A prominent eastern university reports its enlarging plans with these words: "In the face of the increasing impact of science on our society it is widely agreed that an essential aim of general education is to impart to the university undergraduate an appreciation of the methods of the sciences." Of course, a decent obeisance is always made in the direction of the humanities and the social studies. The fact remains, however, that in terms of endowment, research facilities and teaching staffs, these studies are far outdistanced by the physical sciences, and the gap is growing wider.

But the gap should be closed rather than widened. We cannot escape the obligation, in this scientific age, to comprehend science; but in the supreme question which faces our generation, physics and chemistry and engineering have no answers for us. They are ethically neutral. They are preoccupied with physical matter. They can give us more horsepower; only the naïve, however, will claim that horsepower can develop within itself the means by which our runaway technologies can be brought under control. They can help

more men to better health and longer life; but they have little relationship to the problem of discovering a new set of human purposes, or to the art of human relations, or to the winning of social and moral wisdom, upon which peace and successful government depend.

It is scarcely necessary to acknowledge our vast indebtedness to science in giving us the methods and patterns of research in human relationships. Every contribution of science to the problems of society is to be welcomed. But the enlightenment of science is bringing with it a tendency to reject the limitations of science. To expect that exact measurement and exhaustive definition will relieve us of the necessity of ethical inquiry, or that the meaning and values of human life will somehow or other crystallize as physics crystallized around the concepts of mass and energy, is a form of superstition as deadly as any we have known.

The issues of our time and of human destiny will be determined, not at the physical, but at the ethical and social level. Material power and dollars and military ascendancy may preserve us temporarily; but the dynamic tensions of our society can be relieved only by moral and social wisdom, and that kind of wisdom cannot be precipitated in a test tube nor can it be won by the brilliant processes of nuclear physics.

In the same essay which was quoted at the beginning of this section, Professor Whitehead went on to say: "It must be admitted that there is a degree of instability which is inconsistent with civilization. But on the whole, the great ages have been the unstable ages." This is the ray of hope that lightens the darkness of the present hour. It is not in times of security that men build a Chartres Cathedral or write a

Hamlet or push their boats across an unknown ocean to discover a new continent. Oddly enough these achievements occur in years of instability.

Danger and hazard mark our age today. But in Professor Whitehead's phrase, it can be a great age, like other ages that have been born out of fear and challenge. Its greatness, however, if achieved, will consist in its search for an enlightened humanism and for rational and ethical values that will rise above our time as the spires of Chartres rose above the twelfth century.

The Immediate Task and the Ultimate Goal

IN 1947 representatives of The Rockefeller Foundation visited practically every country in the world with the exception of Bulgaria and the Soviet Union. Visas to enter those two countries could not be obtained, nor was it possible to establish contact with their scholars and scientists. The conflict of ideologies—what Gibbon called "the exquisite rancor of theological hatred"—divides the world today in bitter partisanship, just as Europe was divided by its religious wars of the sixteenth century. As a matter of fact, ideologies have always divided mankind; the rifts are centuries old; there has never been one world. What we are attempting today is something that has never in recorded history been accomplished. We have barely begun on what is unquestionably the noblest as well as the most discouraging task which statesmen and nations have ever undertaken.

If the aim were to iron out all the differences which exist among men—to achieve a utopia of unruffled unanimities—it would be fatuous even to begin it. The world of the future —if any world survives—will be a world of diversity, held

together by a conception of common interests. It will be a world in which many political faiths and economic creeds are tolerated and widely differing points of view fertilize each other for the common good.

Our challenge in this generation is to discover the common interests, the terrain of possible collaboration, the overlapping areas of curiosity and sympathy, of aspiration and mutual advantage, that bind the human race together regardless of ideologies or boundary lines. The search for these rallying points of unity, the development of new techniques and areas of cooperative action where ideas and experience can be pooled and combined—this is the immediate task; this comes first; this is the foundation of the ultimate structure of a united society.

The activities of the World Health Organization of the United Nations furnish a pertinent illustration; for health is something that all men desire and there is no limited supply for which nations must compete. Public health work carries no threat to anybody, anywhere. Cancer and scarlet fever have no political ideology. There is no Marxian method of eliminating gambiae mosquitoes as distinguished from a Western democratic method. The principles of sanitary engineering do not bear a Russian or an American label. No difference exists between tuberculosis in the Soviet Union and tuberculosis in the United States. Infantile paralysis is the same thing in Moscow and in Washington, and human sorrow is no less poignant in one city than in the other. The world of disease and misery is not divided; it is a common world. In terms of human suffering the world is truly and tragically one world.

What is true of medicine and public health is true also in the fields of science and humanism. There are no French or English enzymes, no German or American electrons. The

second law of thermodynamics is not the property of any group or nation. Tolstoy and Shakespeare and Beethoven and Tschaikowsky belong to the world, just as the spiritual ideals of Gandhi have now become the heritage of mankind. These are some of the common interests whose waves are breaking over the old flag-marked boundaries and are bringing to the world a conception of civilization and of the intellectual life of man as a cooperative achievement.

In spite of all evidence to the contrary the things that divide the world are trivial as compared with the things that unite it. The mutualities of human beings everywhere far exceed their divergencies. In all the countries which representatives of the Foundation have visited over these recent years, one outstanding fact has emerged: the people are dominated by a passionate hope for peace, security and a better life. They seek a world in which men may grow in strength and dignity. They want no world in which war periodically tears to pieces the bright promise of the future. That is the pattern of thinking and planning everywhere. Men differ as to the means by which these ends are to be secured, but as to the goal itself there is little diversity of opinion.

This substantial unanimity of aim, sharpened and oriented in our time to a new point, is at least a gleam of hope in a dark age. Mankind is conscious as never before of common roots and common potentialities, of common basic desires and appetites and the common skills required for their satisfaction. A recognition of kinship exists which wars and clashing ideologies can blur but cannot eliminate. Slowly but perceptibly there is developing a conception of the intermeshed interests of men, of the universality of human need, of the single destiny that awaits life on this planet, whether it be good or evil. This is the principle that lies behind the United

Nations, the incentive that gives moral and intellectual greatness to the work of this generation in clearing the ground for the new advance.

It is idle, of course, to minimize the towering difficulties that confront us or the heart-breaking frustrations through which we shall live in the years immediately ahead. But we must push toward the ultimate goal of world unity with iron determination and fanatical patience. We must believe in it against all discouragements, against all failures, against all betrayals. There is indeed nothing else we can do. For the long pull there is no alternative. Or rather, the only alternative involves a price in terms of cosmic disaster which, unless the world is overwhelmed by a Gargantuan madness, it will not consent to pay.

Benjamin Franklin, writing in 1789, said: "God grant that not only the Love of Liberty, but a thorough Knowledge of the Rights of Man may pervade all the Nations of the Earth, so that a Philosopher may set his Foot anywhere on its Surface, and say, 'This is my Country'."

That was the dream of 160 years ago; that was the faith that inspired our forefathers as they hammered out the larger loyalty of the federal union; and today as we face the necessity of building that loyalty on even wider foundations, we must not let the song die on our lips. It is not the mistakes of our idealists, but the cynicism of our realists that will defeat us.

European Laboratories and Isolation

SINCE V-J Day The Rockefeller Foundation has appropriated $5,584,469 for various activities in the war-crippled countries of Europe. The aim has been twofold: first, to get research started again by providing equip-

ment or support to a few of the universities, libraries and research centers; and second, through conferences and aid in procurement of scholarly journals, to reestablish the contacts of these institutions with each other and with the rest of the world. All five divisions of the Foundation have participated in this effort, i.e., Natural Sciences, Medical Sciences, Humanities, Social Sciences and Public Health. The largest grants were made in Great Britain, France, Denmark, Holland, Norway, Sweden and Switzerland, with smaller grants in nine other countries.

It is easy to exaggerate the significance of what has been accomplished. One has only to see the vast, unanswered needs in the way of buildings, books, periodicals and equipment to realize the utter inadequacy of a sum like five million dollars in restoring Europe to anything approaching its former place in the intellectual life of the world. The situation is far beyond the capacity of private funds. In scattered locations such funds can ameliorate some of the difficulties, but the need is so universal and so overwhelming that it can be met

Seminar in the Institute of Hygiene and Social Medicine, University of Brussels.

only by governments or international agencies. Often the sums required are relatively small—a few dollars for chemicals to continue some piece of laboratory work, or two or three hundred dollars for essential equipment, or money for books and periodicals to enable a particular scientist or scholar to discover what his colleagues in other countries have been doing, or for an opportunity for him to consult with them in their universities and laboratories. But the aggregate of such sums is formidable, and a private agency with limited funds can do hardly more than palliate the evil. Moreover, palliation may be an evil in itself. To the extent that it lessens the difficulty, it tends to lessen the responsibility where the real responsibility undoubtedly rests: on governments and on the international agencies concerned.

The situation is further complicated by the deepening crisis in international monetary relations. In many countries at the end of 1947, research workers, even when they had funds in their own currencies, could not obtain the materials, equipment, books and periodicals from the few countries—typically the hard-currency countries—that were able to supply them. More than ever, travel essential to research became restricted, and around the world a new intellectual fog has been settling down, as the advance of knowledge and understanding has been curtailed by currency control. And an intellectual fog, if it becomes dense and general, can be more baffling and stifling than any tangible barrier.

The point cannot be too often stressed that the health of the intellectual life of the world depends upon the free and unhampered exchange of ideas and personnel between universities and research institutions in all countries. Scientific growth is almost invariably the result of cross-fertilization

between laboratories and groups in widely separated parts of the world. Achievement, more often than not, is the result of the sustained thinking of many minds in many countries driving toward a common goal. The creative spirit of man cannot successfully be localized or nationalized. Ideas are starved when they are fenced in behind frontiers, and barricaded research in the long run can result in intellectual stagnation.

This is why the heavy concentration in the United States of research in atomic physics is unfortunate. The grim necessities of security seem for the time being to make any other course impossible, but we must face the fact that from the standpoint of the growth of knowledge, it is an unhealthy arrangement. All knowledge is so interlocked that we cannot control research on the destructive aspects of atomic energy without at the same time interfering with world-wide research on its beneficent possibilities. In the harnessing of forces which may bring incalculable benefit to mankind, knowledge is retarded through lack of cross-fertilization, and the advance into the unknown runs the risk of being slowed down because the intellectual air is too thin to breathe. In the history of modern science no single country by itself has ever had the intellectual resources or the imagination to bring to full fruition all the potentialities of a new idea.

Equally unfortunate is the growing isolation of the scientists and scholars of Eastern Europe. The Soviet Union, for example, has long had distinguished mathematicians. Her work in biomedicine has been imaginative and stimulating. But how can these workers and scientists maintain the high level of their creative research if they are not allowed by

their government to have direct and intimate relationship with what is being done in these same fields in other parts of the world? To speak of "bourgeois mathematics" or "capitalistic medicine" is to use terms which, at least to a Westerner, are meaningless. The truth or falsity of a mathematical formula does not depend on latitude or longitude, and the effectiveness of penicillin against disease has nothing to do with economic theory. The Soviet Union is planning the restoration of the great Poulkova Observatory near Leningrad and of Simeis in the Crimea, both of which were totally destroyed in the war. But what kind of astronomy can be developed in the Soviet Union if her astronomers are isolated from contact with their fellow scientists and observers elsewhere? The stars in their courses do not look down on Russia alone. The intellectual and cultural life of men cannot without impoverishment be walled in behind national boundaries. Isolationism is a blight which undermines the vitality of everything it seeks to preserve.

The Problem of Germany

IN 1947 Robert J. Havighurst of the faculty of the University of Chicago made an extensive study for The Rockefeller Foundation of the present situation in Germany in relation to universities, primary and secondary schools, libraries, youth problems and policies, teacher training, contacts with the outside world and so on. With the cordial cooperation of the Department of State and the American Army authorities he was able to carry on his survey in the American, British and French zones, and he made one trip to Leipzig in the Russian zone.

It is impossible to do more than summarize very briefly the observations and recommendations of his voluminous

report. The first vivid and startling impression which a visitor receives is the extent of the poverty of Germany. An American has great difficulty in understanding a German today, for he lives at one end of the scale of plenty, while the German lives at the other end. To the German, hunger is a constant companion. Not until his standard of living is raised again to a decent level can the German possibly contribute to the creation of a peaceful, democratic society.

Equally difficult for an American to grasp is the sense of utter isolation which affects many men of good will in Germany—men who suffered but survived in Nazi concentration camps, and others who were passively resistant to fascism. These people now are taking the lead in the attempt to bring Germany back into the family of nations. Since 1933, however, they have been so completely divorced not only from the rest of the world but also from their fellow men in Germany, that they have come to wonder whether there is any reality outside of the terror and the ruin they have known in their own country. Another kind of isolation affects the young people, who have grown up under Hitler and know no other kind of life or thinking.

Yet the basic foundations for a peaceful and productive democratic society are present in Germany today. These foundations can be listed as follows: (a) leaders who have an anti-fascist record and who want to cooperate with other governments in a strong international organization, (b) a developing realization on the part of the German people of the evils of the Nazi regime, (c) the influence of the churches and the labor unions in holding people together and in disciplining them for orderliness and stability, (d) a working population with a high degree of skill and technological training.

Periodicals to be sent by the American Library Association to libraries in war areas.

On the assumption that Germany is allowed to regain a considerable measure of productivity, there would seem to be at least two prerequisites essential to the development of a democratic society. The first is the restoration of communication between the Germans and the people of other countries. The wall of isolation which has tended to make Germany one vast prison must be thrown down, and ways must be opened for the free flow of ideas, through books and journals, films, radio and works of art, and through the interchange of personnel in various types of activities. The second prerequisite is the development of younger leaders who know the world outside of Germany. Young men and women from the universities, labor unions, youth organizations, newspapers, churches and industries must breathe the air of other countries and learn how people in those countries live and think.

These steps are no less needed in Austria and Italy, as well as in all the countries whose people have been cut off from free and natural intercourse with the people of other nations.

In addition to its regular European program, of which mention has already been made, the Foundation in 1947 set aside $500,000 for work in the field of what might be called European reconstruction. Illustrating the type of activity contemplated by this grant, three or four appropriations may be cited. The sum of $120,000, to be spent over a two and a half year period, was given to the University of Chicago to set up an American faculty at the University of Frankfurt. From six to ten university professors from Chicago will be constantly in residence at Frankfurt, each professor serving for at least six months. They are being selected primarily from the fields of the social sciences and the humanities, specifically in American culture and history, English language and literature, sociology, political science, psychology, American public law, international law and philosophy. Their primary concern will be to work with young Germans who intend to follow academic careers, but they will also give general courses and will be available for lectures at other German universities. Each professor will be released from his university duties at Chicago for two quarters in order that he may adequately prepare himself prior to going to Germany for the task before him.

Another grant, in the amount of $60,000, to be spent over three years, was given to the Germanistic Society of America for subscriptions to scholarly journals and periodicals for fifteen German and three Austrian university libraries. In addition, $9,000 was appropriated for medical literature in the same institutions. These periodicals and books are now being delivered.

Further grants were made to enable Professor Eduard Heimann, an economist on the staff of the New School for Social Research, to give courses at Göttingen and Hamburg; and Karl Brandt, an agricultural economist from Stanford University, will go to Heidelberg. The sum of $25,000 was appropriated to Columbia University to bring to Great Britain, the United States and Canada leading German personnel attached to German radio stations. It is believed that the establishment of German radio as a public service, free from political control, will be facilitated immeasurably by acquaintance with the rights and responsibilities of British, American and Canadian radio in their educational, informational and entertainment functions. Plans are also under way to provide this same type of external contacts for German journalists, and it is hoped that similar arrangements can be developed for leaders of youth organizations, labor unions, churches and industries.

The ancient Greeks had a curious law on their statute books. It dealt with monuments celebrating the victories of war. Such monuments were permitted, and the defeated enemy was forbidden to tear them down; but the victor was not allowed to repair them. Moreover, the monuments had to be built not of stone but of wood. In commenting on this legislation Plutarch remarks: "It would be invidious and malignant that we men should ourselves repair and renew the monuments of hatred towards our enemies when time is making them dim."

Medicine in China

THE largest grant which The Rockefeller Foundation made in 1947 was an appropriation of $10,000,000 to the China Medical Board, Inc. This represents one of

the Foundation's oldest interests. Created in 1914 as an operating division of the Foundation, the China Medical Board was responsible for the erection and development of the Peiping Union Medical College, one of the leading centers of medical training in the world. This school has become the symbol and synonym for high quality in professional education in China. In the twenty years of its operation from 1921 until it was closed by the Japanese following Pearl Harbor, it made a distinguished contribution not only in advancing modern medicine in China, but in helping to establish in the

Peiping Union Medical College. Terrace and portico of Anatomy Building.

Far East the value of scientific method and inductive reasoning. In this sense it represented perhaps the best gift that America could offer to China.

Over forty years ago, in a lecture at Stanford University, William James said that a college should be a place of "intellectual ferment." That phrase describes with vivid accuracy the institution in Peiping. During the period of its operation less than ten of its more than three hundred graduates went into private practice; all the others were absorbed in medical teaching posts or governmental medical positions. They had been exposed to an intellectual ferment and they had a new gospel to preach across the length and breadth of China. It was the gospel of modern medicine and the conception of what it could do for the millions of people who had never known it. Today six of the national medical schools of China are under the leadership of graduates of the Peiping institution, and six other medical schools are headed by individuals who, although not graduates of the college, spent many years as members of its staff.

In 1928 the China Medical Board, through which the Foundation had supported the Peiping Union Medical College, was incorporated under the laws of the State of New York as a separate entity, and the title to the Peiping property was transferred from the Foundation to this new body. In the same year $12,000,000 was given by the Foundation to the China Medical Board, Inc., as an endowment fund, in the hope that while current budget subsidies from the Foundation would undoubtedly be necessary over a period of years, receipts from Chinese sources might ultimately take their place. This hope had not materialized when the United States entered the war in 1941.

When the buildings of the Peiping Union Medical College

were recovered from the Japanese in 1945, although no material structural damage had been suffered, considerable equipment had disappeared and the lack of maintenance and upkeep over the years had resulted in serious deterioration. In 1946 the Foundation sent a commission to China consisting of Dr. Alan Gregg of the Foundation staff, Dr. Harold Loucks of the China Medical Board, Inc., and Dr. C. Sidney Burwell, dean of the Harvard Medical School. This commission reported early in 1947, and as a result of its recommendations a final appropriation of $10,000,000 was made to the China Medical Board, Inc., bringing its endowment fund to a total of $22,000,000. Including this endowment fund, the Foundation's total expenditures for the erection and maintenance of the Peiping Union Medical College have been $44,947,325, the largest contribution which the Foundation has ever made to a single project. This must necessarily be the conclusion of Foundation grants for this particular purpose.

It may seem an odd moment in the history of the world, and particularly in the history of China, to make a fresh investment in the development of modern medicine in that unhappy country. But medicine, as we have already pointed out, is not a matter of political ideologies or flags or marching armies. It is interesting to note that the graduates of the Peiping Union Medical College are serving the populations on both sides in the tragic war that is now decimating China. They are bringing their healing techniques not only to needy men and women but in a deeper sense to a human society that is desperately sick. In dark hours like these it takes perhaps a leap of faith to believe that medicine can be one of the bridges across the gulf that separates this frightened present from a saner and better-balanced future. We shall, of course,

need other bridges, but modern medicine, bringing us a conception of common human need that overrides our irrational and suicidal differences, can surely help.

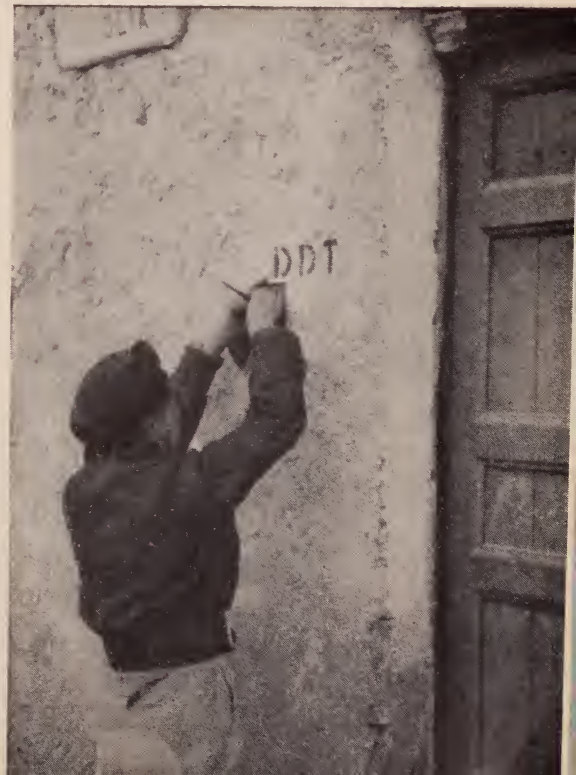
Meanwhile the Peiping Union Medical College has been reopened, although under limiting conditions. The China Medical Board, now a completely independent organization, with its own trustees and officers, is empowered by its charter to extend financial support not only to the Peiping Union Medical College but to other like institutions in the Far East or even, indeed, in the United States. However, as long as opportunity remains for effective work in the College in Peiping, its first responsibility lies there.

The Widening Horizons of Public Health

IN no area of knowledge and practice are changes occurring more rapidly than in medicine and public health. We seem to be on the threshold of an era more promising than any we have known. The sulfonamides, penicillin, radioactive isotopes, DDT—to mention only a few new instruments which have been placed in our hands—foreshadow a new move forward, a new renaissance, a new period in human development when the imagination is endowed with wings. If only we can be freed from the shrieking insanity of another war, it does not seem impossible to believe that within a period of no unreasonable duration we shall be able to limit the ravages of diseases like cancer, tuberculosis, infantile paralysis and perhaps some of the degenerative disorders and even the common cold.

But the advance is not only in curative medicine; it involves the relations of medicine and public health to each other, and their place and scope in the social structure. There

are strong evidences, for example, that the border lines between curative and preventive medicine are fading out. Public health has been concerned primarily with its traditional preventive work, on the general theory that "a fence at the top of the cliff is better than a hospital at the bottom." But diagnostic and curative medicine cannot avoid preventive measures any more than preventive medicine, under certain circumstances, can stay out of the curative field. We have the phenomena now of public health personnel running hospitals (for the very good reason that if they did not run them, nobody else would) and of practitioners, in fields like obstetrics and pediatrics, moving openly and boldly over to the preventive side. It works both ways, and substantial experience as well as practical demonstrations are accumulating, particularly in the English-speaking and Scandinavian



Malaria campaign in Sardinia. Marking a house that has been sprayed with DDT.

countries, which show how the old lines are breaking down. Certainly the attempt to fix the boundaries of public health by establishing a rigid distinction between prevention and cure is no longer realistic.

To what ultimate goals this trend is leading no one can do more than guess; but one aspect of the problem is intimately related to the economics and sociology of medical care. In 1947 Dr. John B. Grant of the staff of the International Health Division of the Foundation made a survey of the developing ideas in relation to medical care in Australia, New Zealand, Canada, Great Britain, Denmark, Finland, France, Holland, Norway, Sweden, Switzerland, South Africa and the United States. His report showed a world-wide trend toward a far broader distribution of the benefits of modern medicine than has hitherto, at least in the United States, been thought practicable. The economic barriers to adequate medical care, which previous generations have tolerated as a necessary evil, now lie heavily upon the consciences of people everywhere. It is inconceivable that complete preventive, diagnostic and curative services should, for any individuals or groups, be determined by financial status rather than by actual need. No nation that values the worth built into its human population can continue to allow its citizens to die, or for that matter to be only half alive, solely because they are unable to pay for what modern medicine could give them. Health is a basic human need, and in all the countries visited by Dr. Grant steps are being taken, with varying degrees of thoroughness and success, toward a program of curative and preventive measures which will make available to every individual, without discrimination, all the facilities of modern science necessary to the development and maintenance of his mental and physical capacity.

Public health is thus reaching the stature of a social science in the service of society. It has its roots deep in the general welfare. It embraces fields like nutrition, housing, recreation, education and social security. It is an integral part of the social process.

This point of view represents a radical departure from American thinking of even two decades ago. But our democracy is not static; it is a vigorous and growing faith. The American tradition has always been a tradition of experimentation. The sturdy stuff that makes this nation great is its capacity for adaptation, its willingness to meet new conditions with new methods, whether in the realm of machine tools or social arrangements. We have kept ourselves strong and healthy because we have known, instinctively at least, that the termites of history are waiting for ideas and practices which have become outmoded and outgrown.

Speaking before the International Conference of Physicians in London this last year, Winston Churchill told the story of an eminent American freethinker who was once asked how he would have made the world different if he had been the Deity. He replied: "To begin with, I would have made health infectious instead of disease." We shall probably never completely succeed in eliminating the infectiousness of some diseases; but there is a deep sense in which our new knowledge and our widening conceptions of public welfare will result in making health, if not infectious, at least within the reach of all men.

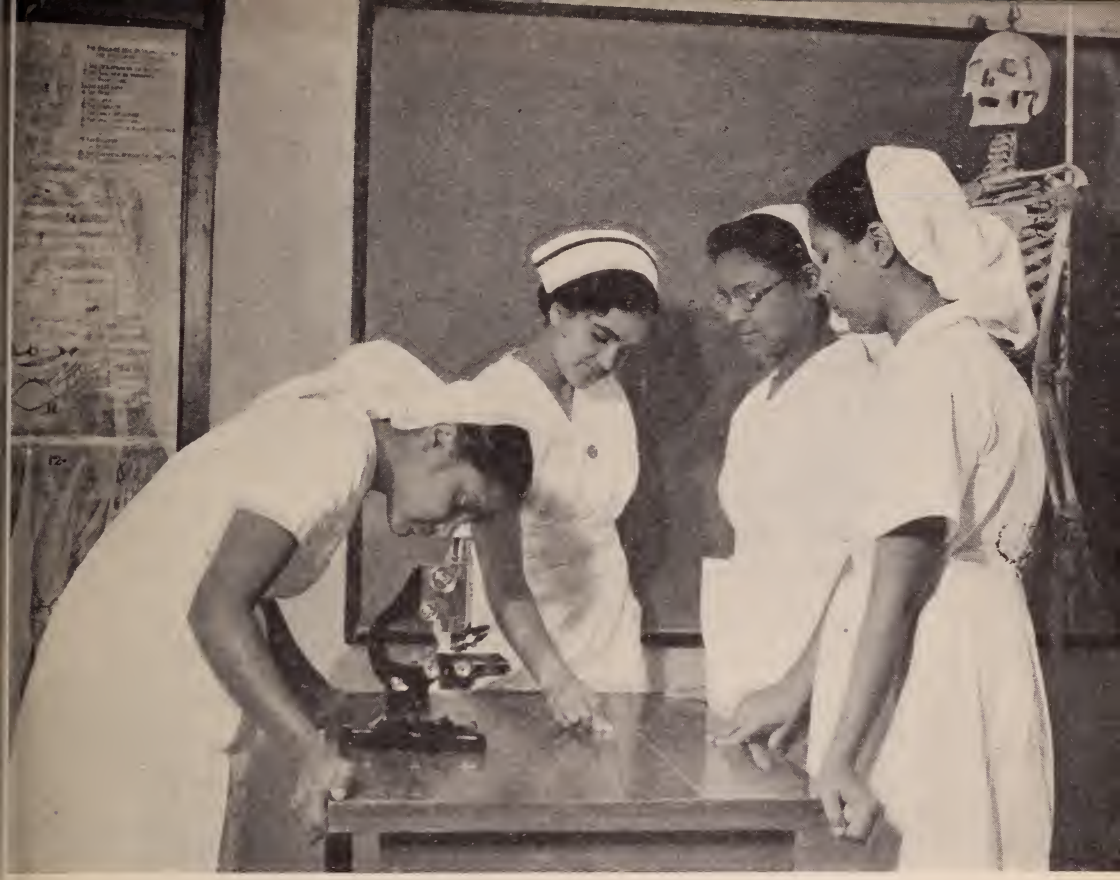
The Education of Nurses

THE nurse today occupies an increasingly significant position in the extension of modern medicine. The growth of public health services and of hospital programs, in the more fortunate parts of the world, and the

new stirrings toward better standards in countries still marked by poverty and illiteracy, are creating a demand for her services on a global scale.

The education of the nurse is, therefore, a matter of deep social concern. Unfortunately, in most of our universities the schools of nursing have not yet been placed on the same basis as other professional schools. The traditions of the apprentice system have a dignified past. Today, however, they are too frequently employed to justify a training scheme whose principal but unacknowledged aim is the provision of a constant supply of cheap labor. There is scarcely a score of institutions in North America where the teaching of nursing is based on modern educational principles. Even today large medical centers are being planned with no realization of the necessity of including adequate schools of nursing. More important still, there is far too little awareness of the new patterns of medical practice in which the nurse is an indispensable part. Everywhere around the world the emphasis is shifting from sickness to health, from therapy to prevention, from the physical to the mental and emotional; and the outpatient departments of hospitals, together with the public health agencies, are taking on wider significance, as the expanding needs of society underscore the growing importance of preventive medicine. In this vast development the nurse has a place of strategic importance, and the time has come—indeed, it is long past due—to discard the compromises and half measures which have too often marked the course of nurse training, and to base the profession on educational principles broad enough to sustain the new promises of the future.

For nearly thirty-five years The Rockefeller Foundation has been interested in nursing education and has appro-



Student Nurses, College of Nursing, Delhi, India.

priated sums in excess of seven million dollars for this purpose. This interest has been related primarily to the Foundation's program in public health, and for that reason its emphasis has been placed on the preventive and social aspects of nursing rather than on the strictly curative side. In other words, the Foundation has been concerned not so much with the training of the hospital or bedside nurse as with the development of young people for community nursing service. But both types of nursing are essential, and both should stem from the same basic pattern of education. True,

many routine bedside duties may in the future be discharged by some other sort of personnel provided by short training courses specifically designed for this important task. But over-all responsibility for nursing care can only be assumed by those whose education is unequivocally professional.

The public health nurse has come into her own. In point of numbers she far exceeds other health workers. Upon her, in large measure, the practice of public health depends. Health work succeeds or fails as the public health nursing services are good or poor. The Goldmark report, published in the early twenties and financed by The Rockefeller Foundation, was the first great milestone in the development of adequate educational standards for public health nursing. This report was implemented by the establishment at Yale University, with the help of the Foundation, of the Yale School of Nursing, with America's outstanding nurse, Annie W. Goodrich, as its first dean.

It was in the early twenties, too, that the Foundation began to develop nursing education in Europe. The first grants were made to encourage health programs in the new countries carved out of the old empires of Central and Eastern Europe. Many of these countries were unable to sustain building programs adequate to provide hospital treatment on the necessary scale. On the other hand, all would benefit by a public health program designed to reduce the number of persons needing such care.

To this end The Rockefeller Foundation aided Cracow and Warsaw in Poland, Debrecen and Budapest in Hungary, Zagreb in Jugoslavia, Prague in Czechoslovakia, Brussels in Belgium, Lyon in France, Athens in Greece,

Cluj and Bucharest in Rumania, Helsinki in Finland and Aarhus in Denmark to establish modern schools of nursing, independent of hospitals, whose objective in each instance was to prepare well-selected young women for the public health field.

In this same decade the Anna Nery School of Nursing was opened at Rio de Janeiro to train young Brazilian women for public health work; and in China, the Peiping Union Medical College created a school of nursing financed with Foundation funds.

In the early thirties aid was given to the School of Nursing of the University of Toronto, to establish a basic professional program in the preparation of students for community nursing service. Kathleen Russell's leadership, scholarly ability and insight into the community's nursing needs have produced an outstanding research program, and Toronto is one of the peaks of nursing training in the world.

In more recent years the Foundation has helped in the establishment of various schools of nursing in the United States as well as in countries like Venezuela, Colombia, Ecuador and Finland. Altogether, aid has been given in the creation of seventeen schools of nursing in eleven countries in Europe, Asia and Latin America, six in the United States and two in Canada.

Important as the capital projects are, it is recognized that buildings are not the vital part of any program; rather, it is the people who put the program into operation that really count. The Foundation has emphasized from the beginning that the proper preparation of teachers, supervisors and administrators for their posts of responsibility in the training of nurses is of paramount importance. An extensive fellow-

ship and travel grant program has, therefore, been in operation for nearly a quarter of a century, bringing from one country to another, from one institution to a particular key center, the leaders of the nursing profession who could most profit by such an experience. A total of 126 travel grants and 390 fellowships have been awarded for this purpose. To aid in this exchange, consultants attached to the nursing staff of the Foundation are now stationed in Europe, South America, the Near East and the Far East.

The Foundation has been fortunate in having on its staff three distinguished nurses: Miss F. Elisabeth Crowell, Miss Mary Beard, and Miss Mary Elizabeth Tennant, the present head of the nursing section. Their program has had as its broad aim the raising of standards of nursing education and practice around the world. As an indication of the international character of this activity, it can be pointed out that in 1947 Miss Tennant's work took her to Latin America, India, China, Japan, Korea, the Philippine Islands and Hawaii. In 1946 she visited Egypt, the West Indies, the Near East, England, France and Czechoslovakia.

The Cross-Breeding of Biology

OVER the last two decades The Rockefeller Foundation has, in the field of the natural sciences, put its main emphasis on experimental biology, and particularly on the application of the techniques of the physical sciences to the problems of living matter. Just as the corn breeder obtains greater vigor and larger yield by making hybrid crosses of different lines, so in science new strength and gratifying new results can be obtained by joining two different disciplines. In terms of this analogy, the Founda-

tion's program has been engaged in sponsoring marriages between the physical and the biological sciences. These are by no means new alliances. The history of such unions can be traced over hundreds of years. Nevertheless, experimental biology, as it exists in the laboratories of today, is a surprisingly young subject.

Of the hybrid crosses that have occurred in the development of modern biological research, the first was between chemistry and biology. During the last half-century this union has helped to unlock the secrets of plant and animal nutrition, of vitamins and of hormones, and more recently of enzymes. It has given us the methods, the skills and the insight to pursue these studies down to the level of the living cell. Today, with such development as virus research and chemical genetics, it is pushing our knowledge to a point where we are dealing with the intimate details of those basic processes which characterize life itself.

Within the last few decades, the cross between biology and physics has firmly established itself as a fit companion for biochemistry, and this newer union promises equally large and significant returns. Biology no longer confines itself to organs, tissues or even to cells. It has reached a molecular level; and we speak, in an atomic age, of the infinitely little things that have become visible with the electron microscope, or that can be separated by the terrible forces of the ultracentrifuge, or that can be surmised from the images they cast on an X-ray crystallographer's plate. Indispensable as the optical microscope remains in biology, it is no longer the predominant tool that it was only a quarter of a century ago. The modern biological laboratory often looks surprisingly like a chemical or physical laboratory. The frontier of

biological knowledge has penetrated beyond the limits set by the optical microscope, and is now located out in that strange world of individual molecules, previously invaded only by the physicist and chemist.

Each new hybrid cross in science has given rise to, or has developed out of, an ever increasingly complex array of scientific tools and techniques. As experimental biology outdistances the limits of any one discipline, so, too, it outdistances the financial limits of its former laboratories. The institutes which can afford ultracentrifuges, X-ray equipment, vast computers, spectrophotometers, electrophoretic

Gates and Crellin Laboratories of Chemistry, California Institute of Technology. An amino acid model.

machines and cyclotrons are not numerous; and we may soon see the beginnings of another hybridization, at the institutional level. Indeed, it has already begun, for we are witnessing the development of specialized centers for enzyme study or for virology or for protein research, and cross-fertilization between these centers is an obvious necessity.

This development toward specialization could take an unfortunate turn if it entrenched itself behind the frontiers of nationalism, thus defeating the possibility of general cross-fertilization. Specialization by countries in a world in which the free international exchange of men and ideas had been destroyed would be a calamity to the development not only of biological research, but of all research as well.

During 1947 the Foundation made several significant grants in this general area. It is not surprising that two of them—one for $250,000 and one for $50,000—went to the two outstanding institutions in the United States which emphasize the applications of basic science to biology, i.e., the Massachusetts Institute of Technology and the California Institute of Technology, the former dealing largely with the relations of physics to biology, the latter with the applications of chemistry.

In England grants were made to two distinguished biologists who were originally trained in physics: $85,000 to W. T. Astbury, professor of biomolecular structure at the University of Leeds; and $21,000 to J. T. Randall, director of the Biophysics Research Unit of King's College, University of London.

A grant of $27,500 was also made to enable Professor Norbert Wiener of the Massachusetts Institute of Technology and Dr. Arturo Rosenblueth of the National Institute of Cardiology in Mexico City to continue joint research on the application of mathematical analysis to prob-

lems of the central nervous system. Two other grants, specifically in biophysics, one of $17,000 and the other of $12,000, were made to the brilliant Bohr-Hevesy, Rehberg-Krogh group at the University of Copenhagen; and to the equally distinguished Kluyver-Milatz team at Delft and Utrecht in Holland.

The Unity of Science

THE fragmentation of knowledge into uncoordinated specialisms has long been recognized as one of the chief evils of modern scholarship. Few people can grasp or comprehend more than a small segment of the whole domain of learning, and attempts at integration and synthesis often result in superficiality. Liberal education in universities and colleges has, for example, too often consisted of exposure to an absurd collection of bits of knowledge held together by no visible thread of unity or coherence.

There is, of course, nothing new about this situation; it has been under discussion for more than a generation. But although many institutions are now reorganizing their courses of study in the interests of a greater unity, little has been done about the central core of the problem. Meanwhile, the irresistible advance of knowledge involves an equally irresistible increase in specialization.

It is paradoxically true that as the segments of knowledge become more deeply cultivated, more and more interconnections between them are developed. Thus, we now have hybrid disciplines, such as psychobiology, biomathematics, astrophysics and biophysics, which represent the necessary bridging between principles and hypotheses that are no longer explicable in terms of a single field of knowledge. Unfortunately, however, these cross-connections themselves

quickly become specialized, each with its own highly particularized techniques and terminologies. Thus, although specialization leads to certain integrative results which might counteract its own evils, the practical effect on general education of these curative tendencies has been slight, and the problem remains substantially unchanged. Indeed, there is a sense in which it has become even more complex and baffling, for the terminologies of these new hyphenated disciplines have not been coordinated with each other, and frequently the same words are used in totally different meanings, or what is even more confusing, in slightly different meanings. Instead of clarifying the issues, therefore, these cross-connections have tended to engender a kind of semantic fog.

Some twenty-five years ago in Europe, a group known as the "Vienna Circle" began its attack on the problem of integration by way of a new logic and a new philosophy of empiricism. This involves exhaustive semantic analysis, the aim of which is to dissipate the Babylonian confusion of scientific thinking, so that the propositions of all sciences become statements about observable phenomena described in words whose meanings and connotations are commonly accepted.

The leadership of this movement has, during and since the war, been transferred to the United States, and an Institute for the Unity of Science has received a charter from the Board of Regents of the State of New York. Its activities include research work which cuts across the traditional demarcation lines of specialized disciplines and departments, the utilization of new knowledge in logic, the study of meaning and how it is communicated, and research on the philosophical, psychological and sociological backgrounds of science. This Institute publishes the *International Encyclopedia*

of Unified Science, the *Journal of Unified Science* and the *Library of Unified Science*. In 1947 The Rockefeller Foundation made a grant in support of this work. The activity represents a pioneer undertaking. It is as yet highly experimental, but it has genuine promise in leading toward a deeper integration of human knowledge and culture.

The National Bureau of Economic Research

IN 1947 The Rockefeller Foundation made the largest grant it has ever made in the field of economics. The sum of $1,300,000 was appropriated to the National Bureau of Economic Research, extending support to that institution through 1954.

The National Bureau, which is now in its twenty-eighth year, and which has received support from Rockefeller boards since 1923, is one of the world's leading institutions that seeks to lay a more adequate foundation for objective thinking and research in economics. Beginning in 1920 with investigations of the amount and distribution of national income, the program of the Bureau was gradually broadened to include studies in business cycles, employment, wages and prices. In the next two decades, investigation in production and productivity trends as well as in finance and fiscal policy was added. By entering new fields gradually and at the same time continuing work in old fields, following leads whenever results were promising, the various investigations constitute a significant beginning in the scientific measurement of the realities of economic change.

Dr. Wesley Mitchell, the leading spirit in the creation of the National Bureau, had a conception of research in economics that was daring and at the time perhaps somewhat unfashionable. This conception rested on two beliefs: (1)

Richie Studio

National Bureau of Economic Research.

that the rich capacity of economists to produce imaginative hypotheses was not adequately balanced by efforts at verification and inductive research; (2) that with the facilities now available, it should be possible to supplement theoretical conjecture with scientifically measured fact and relation; and, thereby, to work towards the substitution of tested conclusion and definitely measured knowledge for guesswork and dogmatic hypothesis.

The activity of the Bureau over the years is evidenced by its extensive publications, 197 in all—books, technical papers and bulletins. The findings of these studies are cited in articles

in scientific and professional journals, textbooks, treatises and official documents. They have been mentioned in Supreme Court decisions. Increasing use is being made of National Bureau publications by practicing economists in business, by editorial writers in the daily press and by economic journalists, not only in this country but abroad.

The Bureau, too, has made an impressive record in another direction. Because of the training opportunity involved, young scholars from universities have come in significant numbers to the Bureau for temporary periods. Visiting scholars from abroad also use the materials, studying the methods and consulting the staff. These alumni of the Bureau are now filling important teaching and research posts in universities, and in government and business enterprises.

The action of the Foundation in extending its support through 1954 was a recognition of two important considerations: first, a wise management of our economy—one that will moderate the swings of economic life—is perhaps the prime necessity if America is to win through to inner strength and stability; and second, such a result is equally important if the role of this country in international relations is to be positive, sustaining and dependable. These objectives are not separate; they are opposite faces of the same whole. They cannot be realized if this country does not understand the nature of its myriad economic processes and the means of conserving their health and productiveness.

The complexities of economics, added to the common demand of the "market" for the less able rather than the better in economic thinking, make too often for inadequate standards of work. Retreats from science, retreats from reality and retreats from humanism are not infrequent. Where competent efforts to avoid these limitations exist—as in the case of

the Bureau—they represent important contributions to what Mr. Henry L. Stimson has called "America's fitness to survive."

Approaches to Peace

WORK which looks toward more adequate analysis and understanding of the issues in international relations continued to hold an important place in the grants made by The Rockefeller Foundation in 1947 in the field of the social sciences.

There is a sense, of course, in which the Foundation's entire program is aimed at the single target of world peace. Whether the work has to do with the control of malaria in Sardinia, or the extension of our knowledge of human behavior through research in psychiatry, or the promotion of the interchange of students of philosophy between North and South America, the objective is a humane and rational world in which peace among men can be secured. The preparation of the soil for a social order in which peace can permanently grow requires the maturing processes of time; and although many of us may doubt whether our civilization is going to be accorded this necessary factor of time, unless we take the completely defeatist attitude we have to proceed on the assumption that there is still going to be an opportunity for intelligence to take hold, and that the world of the future will still be a free world in which reason rather than force will control.

Meanwhile we cannot neglect the direct approach to the overwhelming crisis of our generation, and for its part the Foundation has contributed substantial sums over the last decade to organizations and projects that are concerned with the issues of international relations. This policy was, of

course, continued in 1947. For example, the sum of $225,000 was given to Brookings Institution in support of its broad program of research and education in the field of foreign policy. This program, under the leadership of Dr. Leo Pasvolsky, involves, among other objectives, five basic studies:

1) Origin and Interpretation of the United Nations Charter;
2) Foreign Policy Objectives of the Major Powers;
3) Influences Making for Economic War or Economic Peace in International Relations;
4) New Concepts of International Security;
5) International Organizations and Conferences as New Methods of Diplomacy.

In addition, Brookings Institution, as part of its program in the training of specialists, has planned an annual two-week seminar for about one hundred teachers of international relations.

Another grant—in the amount of $30,000—was given for the purchase of books, periodicals and pamphlets for the library of the Palace of Peace at The Hague. This library serves the Permanent Court of Arbitration, the Academy of International Law and, most importantly, the International Court of Justice.

Still another appropriation—in the amount of $75,000—was given for the creation of senior fellowships at the Russian Institute of the School of International Affairs at Columbia University. The Russian Institute, toward whose creation in 1945 the Foundation contributed $250,000, is without doubt the leading graduate school in the United States in the field of Russian studies. In addition to the Russian language, its basic curriculum provides: (1) a broad background and training in five disciplines (history, economy, law and government,

international relations and the social and ideological aspects of literature) as applied to Russia, (2) an intensive research training in one of these five disciplines elected by the student and (3) fundamental graduate training in the broader aspects of this elected discipline.

The senior fellowships will make it possible to bring to the Institute for advanced training some of those persons who are now conducting instruction in Russian subjects in other universities, thus enabling them to broaden their equipment and develop their effectiveness in Russian research.

Other grants by the Foundation in 1947 in this general field of international relations include the following:

1) The Royal Institute of International Affairs ($50,625) —a supplement to an earlier grant toward Professor Arnold J. Toynbee's *History of the War and of the Peace Settlement.*
2) Commission of the Churches on International Affairs ($15,000)—for preparations for conferences on the role of churches in international relations.
3) Johns Hopkins University ($37,400)— for a study of the trends and forces which affect the United States in its international relations.
4) Netherlands Institute of International Affairs ($25,000)—for a broadly based European conference on the economic and cultural aspects of the German problem.
5) Council on Foreign Relations ($60,000)—for general support.

The Humanities in Space

THE humanist is no freer of the danger of parochialism than the scientist. Not only is he apt to be a prisoner of his own specialization, but far too frequently he is narrowly preoccupied with the culture of a limited segment of the world. Particularly here in our western civilization we

look back along the corridor from which our literature, history and philosophy have emerged, only dimly aware of other corridors that lead, like our own, into the vast amphitheater of blending cultures into which we have now come.

Our books and our university courses are too often indicative of this limiting outlook. A volume on the history of educational philosophy was recently published which, despite its general title, included no material on the educational philosophy of the Orient. One can thumb through the catalogues of far too many universities and colleges here in the

University of California. Class in Chinese.

United States without finding a single course that would indicate that the thoughts and history of the Far East and of the Slavic world have any past or present significance.

We are concerned today about a world organization, and we know that unless it can be made to succeed, the atomic age will ride in on a wave of senseless horror. But without a world view of human culture a world organization can scarcely survive. The building of world unity depends in large measure upon a humanism which, limited by no flags or boundary lines, embraces the contributions of men everywhere.

Over the years The Rockefeller Foundation has taken some necessarily modest steps toward this general goal. It was nearly fifteen years ago that the Foundation made its first grants to encourage American humanists to study the life and languages of the Far East, the Near East and the Slavic world. At the outset, the opportunities for encouragement were relatively limited and small in scope. The salient need was for younger men and women who could, by training and experience, qualify as interpreters of these regions through a knowledge of their language and a direct acquaintance with their life and people. To provide this training and experience, the Foundation in 1933 began the award of fellowships for humanistic study of the Far East, the Near East and the Slavic world, with the result that by the end of 1947 some eighty younger men and women had been helped on their way to becoming such interpreters.

During this same period the Foundation also made a series of grants to encourage the humanistic study of these regions in colleges, universities and, to a small degree, in more specialized institutions. The limitation of opportunity at the outset was reflected in the annual totals of grants: $20,000

in 1934; $84,900 in 1935; $152,850 in 1936; $157,100 in 1937; $111,300 in 1938. With the outbreak of the war in 1939, opportunities dwindled, with grants totaling $86,798 in that year and falling to $23,500 in 1940. But from that year on, the annual totals reflect a wider, if more necessitous, interest: $156,400 in 1941; $142,800 in 1942; $234,430 in 1943; $411,700 in 1944; $398,325 in 1945; $325,200 in 1946; and $629,125 in 1947, bringing the fourteen-year total to nearly $3,000,000.

The range and variety of grants of this type made during 1947 may be briefly indicated. The American Council of Learned Societies received $12,000 for the work of its Committee on Near Eastern Studies, $25,000 for the translation into English of important Russian works and $100,000 to augment the supply of materials needed for teaching and research on Slavic studies; the University of Pennsylvania, $60,000 for the development of studies of modern India; the University of Washington, $150,000 for studies of the Far East; Yale University, $25,000 toward the support of a group of advanced students of the Far East; the University of California, $30,000 to develop intensive instruction in Slavic and Far Eastern languages, and $100,000 for the development of junior personnel in Slavic studies; Columbia University, $25,000, likewise for Slavic studies; Indiana University, $27,500 for the development of studies of Eastern Europe, principally Finland and Hungary.

The concentration within the United States of Foundation activity in this field over the last fifteen years is not based on any illusion that internationally acceptable interpretations of history, literature and philosophy can be achieved by American workers alone. The experiment was begun at home and it continued there primarily because of the obstacles created by the war. During 1947 the British Government

published the report of a commission known by the name of its chairman, Lord Scarbrough, pointing to the need in Great Britain for a concerted development in the study of Russia, the Far East, the Near East, Africa and southeast Asia. And interest is developing in the countries of Continental Europe, as is shown by a grant of the Foundation in 1946 to the University of Stockholm toward the training of a group of younger Scandinavian interpreters of the Far East, as well as by its appropriation in 1946 to assist in the re-establishment of Chinese studies at the University of Leiden.

It was not until 1947 that Foundation representatives in the humanities were again able to visit the Far East. No major projects have yet resulted, but a small grant to the National Tsing Hua University for the study of the western humanities, and a grant in aid to Yenching University for development of materials in English on Chinese philosophy, fit into this pattern of action and illustrate the point that the study of human culture must be on a universal basis if it is to furnish understanding of the widening horizons of the political and economic life of men.

The Humanities in Time

WIDENING horizons can be defined in terms of time as well as of space. The humanist is often thought of as one who is preoccupied with the past; but for true humanism there are no visible frontiers between past, present and future. It is the timelessness of his materials which accounts for the humanist's concern with them. Indeed, to release men from the bondage of time is one of his major functions. Not the past alone but its projection into the present and future is important.

In its support of humanistic studies the Foundation has

been interested in work that gives life and force to experience that is both timeless and immanent. Work of this kind is more often quiet than dramatic. Typically it calls for no large expenditures and consequently does not always figure among the major grants recorded in the Foundation's annual reports. The usual requirement is modest provision for release from other duties and for essential expenses which the recipient would find it difficult to bear himself.

For example, grants in aid of research during 1947, ranging in amount from a few hundred dollars to a maximum of $7,500, included provision for a new and interpretative edition of an early Spanish account of the colonization of the New World; the completion of a study of Simón Bolívar; the translation into English of the *Popol Vuh*—the sacred book of the Quiché Indians of Guatemala; a study of the social implications of modern drama; continued help in the preparation of a life of Thomas Jefferson; a study of the thought of Jefferson and Madison; a cooperative study of the work of a living philosopher; a study of the philosophy of art.

Occasionally the Foundation has found it advantageous to delegate responsibility for the award of such assistance to other agencies. The outcomes of a previous grant of this kind to the Newberry Library of Chicago led in 1947 to an additional grant of $50,000 over a five-year period for studies of midwestern culture. It was the earlier grant which made possible such books as *Midwest at Noon*, by Graham Hutton, *American Daughter*, by Era Bell Thompson, and *William Allen White's America*, by Walter Johnson. That these studies of midwestern culture produce more than books may be illustrated by the remark of a listener following an address by the director of the Library: "I never knew history was like that. I never knew that the Midwest had a history. I thought

that history was Bunker Hill and Plymouth Rock and George Washington."

To help in extending the frontiers of the mind in time as well as in space—this is the framework of the Foundation's program in the humanities. Obviously its decisions are by no means infallible, and the promising opportunities which it meets far exceed its available funds. But certainly in our world today no field of activity is more important than the field of humanism. It is to the philosopher, the poet, the artist, the historian that we look for insight into the nature and destiny of human existence; it is from them that we take courage to reaffirm our faith in man's ultimate ability to find a rational solution of the problems of meaning and freedom which underlie his existence on this planet.

Applications Which Were Declined During 1947

DURING 1947 the Foundation was obliged to decline a total of 2,510 applications for financial aid, as compared with 1,839 in 1946. Of the total, 1,073, or 42 per cent, were from foreign countries. Some of these applications represented projects of interest to the Foundation but were declined because other opportunities seemed more promising. The great majority, however, were declined because they fell outside the areas of work in which the Foundation is attempting to be of service.

The Foundation does not make gifts or loans to individuals, or finance patents or altruistic movements involving private profit, or contribute to the building or maintenance of churches, hospitals or other local organizations, or support campaigns to influence public opinion.

The applications which were declined during 1947 may be classified under the following headings: conferences and

meetings, 26; continued aid to projects, 26; cures, remedies, investigations of theories and inventions, 70; development of educational and cultural institutions and projects, 298; European refugees, 44; fellowships, travel and training grants, 1,055; local institutions (including hospitals, theaters, libraries, museums and churches), 217; personal and medical aid, 111; public health projects, 18; publication projects, 106; research projects, 414; miscellaneous, 125.

Finances for 1947

IN the following financial statements are presented summaries of the Appropriations and Principal Fund Accounts of The Rockefeller Foundation for the year 1947. The balance carried forward from the year 1946 was $221,431; the income from invested funds was $10,011,756; the amount drawn from the Principal Fund was $20,000,000. The total of these funds available for 1947 was supplemented by the sum of $876,448 representing lapses and refunds. Appropriations during the year totaled $23,413,615, and the free balance as of December 31, 1947, was $7,696,020. This sum, together with income received in 1948, will be available for appropriation during that year. A complete financial statement will appear in the annual report of the Foundation for 1947 to be published later in the year.

SUMMARY OF APPROPRIATIONS ACCOUNT

Funds Available		Funds Appropriated	
Balance from 1946	$ 221,431	Appropriations	
Income for 1947..	10,011,756	Public Health....	$ 2,250,000
Unexpended balances of appropriations allowed to lapse and refunds on prior year grants....	876,448	Medical Sciences.	1,521,125
		Natural Sciences.	1,670,090
		Social Sciences...	3,051,375
		Humanities.....	1,508,600
		General Education Board.....	1,500,000
Transferred from Principal Fund in accordance with resolutions of the Trustees, December 3, 1946, and January 16, 1947...	20,000,000	China Medical Board, Inc.....	10,000,000
		Miscellaneous....	229,000
		Administration	
		Scientific Divisions	995,494
		General.....	320,374
			$23,046,058
		Authorizations for later appropriation by the Executive Committee.....	367,557
			$23,413,615
		Balance available for appropriation in 1948.....	7,696,020
	$31,109,635		$31,109,635

PRINCIPAL FUND

Book value, December 31, 1946		$138,005,206
Add		
Legacies		
Estate of Robert Marsh, Jr.		3,299
Estate of William O. Wakenight		8,889
Amount by which the proceeds of securities sold, redeemed and exchanged during 1947 exceeded the ledger value		54,422
		$138,071,816
Deduct		
Amounts withdrawn from Principal Fund by action of Trustees		
Meeting of December 3, 1946.....	$10,000,000	
Meeting of January 16, 1947.....	10,000,000	20,000,000
Book value, December 31, 1947		$118,071,816

APPROPRIATIONS MADE DURING THE YEAR 1947

PUBLIC HEALTH		
International Health Division of The Rockefeller Foundation		
For activities of the Division in 1947		
Control and investigation of specific diseases and deficiencies	$306,415	
Laboratories of the International Health Division	150,000	
State and local health services	130,300	
Medical care	25,000	
Public health education	456,400	
Field service	955,600	
Fluid fund	176,285	$2,200,000
Rockefeller Institute for Medical Research, New York		
Toward general expenses of administration and operation		50,000
		$2,250,000
MEDICAL SCIENCES		
Psychiatry, Neurology and Allied Subjects		
American Psychiatric Association, New York		
Work of its Committee on Psychiatric Nursing, for three years		$15,000
Burden Neurological Institute, Bristol, England		
Research in neurophysiology and neurosurgery, for five years		50,625
Columbia University, New York		
Research in genetics of mental disease, for three years		31,500
Research in brain chemistry, for three years		19,500
Study of the effects of fetal and neonatal injury on growth and functional development, for five years		75,000
Dalhousie University, Halifax, Nova Scotia		
Teaching in psychiatry, for three years		19,500
Georgia State College for Women, Milledgeville		
Research in medical genetics, for five years		10,000
Massachusetts Institute of Technology, Cambridge		
Expenses of a project in mathematical biology to be conducted jointly with the National Institute of Cardiology, Mexico, D. F., for five years		13,750
National Mental Health Foundation, Philadelphia, Pennsylvania		
For general purposes, for two years		50,000

University of Chicago, Illinois	
Teaching and research in psychiatry, for five years	$150,000
University of Cincinnati, Ohio	
For development of teaching and research in psychiatry, for five years	175,000
University of Edinburgh, Scotland	
Research in neurosurgery, neurology and psychiatry	20,250
University of Illinois, Urbana	
Research in epilepsy, for three years	27,000
Washington University, St. Louis, Missouri	
Support of the Department of Neuropsychiatry in the School of Medicine, for five years	150,000
Wilhelmina Hospital, Amsterdam, Netherlands	
Research in psychosomatic medicine, for three years	20,000
Endocrinology	
Indiana University, Bloomington	
For development of the library collections in the Institute for Sex Research, Inc.	14,000
Institute of Biology and Experimental Medicine, Buenos Aires, Argentina	
Support of research, for three years	15,000
Medical Education	
American University of Beirut, Lebanon	
For purchase of equipment for the School of Medicine, for two and one-half years	100,000
Fifth International Congress of Pediatrics, New York	
Traveling expenses of European pediatricians to the congress	15,000
Forsyth Dental Infirmary for Children, Boston, Massachusetts	
Expenses of a consultant in dental education, for two years	12,000
Medical Research Council, London, England	
Purchase of scientific equipment, for two and one-half years	20,000
Meharry Medical College, Nashville, Tennessee	
For current expenses	100,000
Preventive Medicine	
University of Brussels, Belgium	
Teaching and research in preventive medicine, for five years	33,000
Washington University, St. Louis, Missouri	
Teaching in preventive medicine, for five years	30,000

Fellowships and Grants in Aid	
Fellowships administered by The Rockefeller Foundation:	
1948	$125,000
National Health and Medical Research Council, Department of Health, Canberra, Australia	
For fellowships in medical sciences, for two years	30,000
Grants in aid administered by The Rockefeller Foundation, for allocation by the officers within categories described by Trustee action and within specified limitations of amount and duration:	
1947	50,000
1948	150,000
	$1,521,125

NATURAL SCIENCES

Experimental Biology	
California Institute of Technology, Pasadena	
Research in biology and chemistry	$ 50,000
Karolinska Institute, Stockholm, Sweden	
Research in biochemistry, for seven years	61,525
Massachusetts Institute of Technology, Cambridge	
Expenses of a project in mathematical biology, for five years	13,750
Research in biophysics, for six years	250,000
Princeton University, New Jersey	
Research in genetics, for three years	10,000
Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine	
Construction and equipment of animal quarters	10,000
University of California, Berkeley	
Research in comparative biochemistry of marine organisms, for two years	12,000
University of Cambridge, England	
Research in cell physiology in the Molteno Institute of Biology and Parasitology, for five years	30,375
University of Copenhagen, Denmark	
Research on the biological uses of isotopes, for two years	17,000
University of Leeds, England	
Research in molecular biology	85,000
University of London, England	
King's College	
Research in molecular biology, for three years	21,000

University of Missouri, Columbia	
Research in genetics, for three years	$ 10,500
University of Oxford, England	
Research in organic chemistry in the Dyson Perrins Laboratory of Organic Chemistry, for four years	19,440
Research on antibiotics in the Sir William Dunn School of Pathology	15,000
University of São Paulo, Brazil, University Research Fund	
Research equipment and consumable supplies, for two years	30,000
University of Stockholm, Sweden	
Research in general physiology	12,600
University of Texas, Austin	
Research in gene chemistry, for two years	12,000
University of Utrecht, Netherlands	
Research in spectroscopic biology, for two years	12,000
Uruguay, Ministry of Public Health	
Equipment of the Research Institute of Biological Sciences	10,000
Yerkes Laboratories of Primate Biology, Orange Park, Florida	
Toward cost of building a new laboratory, and for general expenses, for five years	190,000
Agriculture	
Mexican Agricultural Program	
General expenses	266,900
National University of Colombia	
Equipment for the Faculty of Agronomy, Cali-Palmira, for two and one-half years	10,000
Equipment for the Faculty of Agronomy, Medellín, for two and one-half years	60,000
Other Fields	
American Museum of Natural History, New York	
Research in human paleontology	5,000
Harvard University, Cambridge, Massachusetts	
For research and publication of research in the history of science, for five years	10,000
Institute for the Unity of Science, Cambridge, Massachusetts	
General support, for three years	9,000
International Meteorological Organization, Lausanne, Switzerland	
Analysis and publication of data collected during the International Polar Year of 1932–1933	12,000

Fellowships and Grants in Aid	
Fellowships administered by The Rockefeller Foundation: 1948	$ 150,000
National Research Council, Washington, D. C.	
Fellowships in the natural sciences	50,000
Grants in aid administered by The Rockefeller Foundation, for allocation by the officers within categories described by Trustee action and within specified limitations of amount and duration:	
1947	50,000
1948	175,000
	$1,670,090

Social Sciences

Sociology, Social Psychology and Social Anthropology	
Columbia University, New York	
Cost of three special studies in the Bureau of Applied Social Research, for approximately one and one-half years	$20,000
Study of panel methods in research on public opinion, attitudes and consumer wants, for two years	27,000
Study of trends in labor union leadership, for three years	23,500
National Opinion Research Center, Denver, Colorado	
Study of the isolation, measurement and control of interviewer effect in attitude and opinion studies, for two years	42,100
State University of Iowa, Iowa City	
Study by Child Welfare Research Station of social and cultural factors in child development, for five years	62,400
University of Chicago, Illinois	
Support of a program in education, training and research in race relations, for five years	75,000
University of Minnesota, Minneapolis	
Toward expenses for its Industrial Relations Center, for three years	45,000
The Functioning of American Political Democracy	
Cornell University, Ithaca, New York	
Studies of civil liberties in wartime	10,000
National Institute of Public Affairs, Washington, D. C.	
Training of personnel for the federal services, for two years	70,000

Pacific Coast Board of Intergovernmental Relations, San Francisco, California
General expenses, for three years $ 30,000
Social Science Research Council, New York
Toward expenses of a program of research in housing, for approximately three years 45,000
University of North Carolina, Chapel Hill
Institute for Research in Social Sciences
Expenses of a study of the Coker family, for two years 20,000

The Functioning of the Economy
American Institute of Accountants, New York
Study of accounting definitions and postulates and their effect upon political-economic policies, for three years 30,000
Harvard University, Cambridge, Massachusetts
Program of economic research, for four years 100,000
Institute of Economic and Social Research, Paris, France
For general expenses, equipment, and for printing accumulated studies, for two years 130,000
National Bureau of Economic Research, New York
Support of general programs and special programs of research in finance and fiscal policy, for seven years 1,300,000
University of Oxford, England
For studies in its Agricultural Economics Research Institute of the relations between agriculture and industry, for two years 28,350

International Relations
Brookings Institution, Inc., Washington, D. C.
Research and education in the fields of American foreign policy and international relations, for three years 225,000
Carnegie Foundation, The Hague, Netherlands
Purchase of books, periodicals and pamphlets, and for cataloguing, for four years 30,000
Columbia University, New York
Fellowships in the Russian Institute, for four years 75,000
Commission of the Churches on International Affairs, New York
Expenses of preparing for and holding international conferences 15,000
Council on Foreign Relations, New York
General research program, for three years 60,000

Johns Hopkins University, Baltimore, Maryland	
Study to measure and interpret trends and forces affecting the United States in its international relations, for three years	$ 37,400
Netherlands Institute of International Affairs, The Hague	
Conference on economic and cultural aspects of the German problem	25,000
Royal Institute of International Affairs, London, England (Chatham House)	
Toward expenses of producing a history of the war and of the peace settlement, for five years	50,625
Research and Training Agencies and Activities	
Canadian Social Science Research Council, Montreal, Canada	
Fellowships, for two years	10,000
Columbia University, New York	
Support of research in the social sciences	30,000
Committee on Financing Higher Education and Research, New York	
Survey of possibilities of a study of financing higher education and research	10,000
Office National des Universités, Paris, France	
Expenses of a section for the social sciences in the École Pratique des Hautes Études	30,000
Social Science Research Council, New York	
For fellowships in the social sciences	100,000
Grants in Aid and Fellowships	
Fellowships administered by The Rockefeller Foundation:	
1947	20,000
1948	100,000
Grants in aid administered by The Rockefeller Foundation, for allocation by the officers within categories described by Trustee action and within specified limitations as to amount and duration:	
1948	175,000
	$ 3,051,375

HUMANITIES

Studies in Language and Foreign Culture	
American Council of Learned Societies, Washington, D. C.	
For expenses of translating, from Slavic languages, materials essential for the development of Slavic studies in the United States, for two and one-half years	$25,000

For aid in the procurement and reproduction of materials on Slavic subjects, for three years	$100,000
Support of the Council's Committee on Near Eastern Studies, for three years	12,000
College of Mexico, Mexico, D. F.	
Program in linguistic studies, for twenty-eight months	12,500
Columbia University, New York	
For development of teaching materials and methods of research in the Department of Slavic Languages, for five years	25,000
Indiana University, Bloomington	
Development of East European studies, for five years	27,500
National Tsing Hua University, Kunming, China	
Support of work in the humanities, for five years	20,000
Polish Library of Paris, France	
Expenses of producing a catalogue of its printed holdings, for one and one-half years	14,000
University of California, Berkeley	
Development of intensive Far Eastern language and area courses, for three years	30,000
Development of personnel in Slavic studies, for three to five years	100,000
University of Pennsylvania, Philadelphia	
Work in modern Indian languages and literatures, for five years	60,000
University of Washington, Seattle	
Production of English translations of source materials on Chinese history, for two years	50,000
Research on the Far East in the Far Eastern Institute, for seven years	100,000
Yale University, New Haven, Connecticut	
For development of personnel in the field of Chinese studies, for three years	25,000
North American Studies	
Abraham Lincoln Association, Springfield, Illinois	
Preparation of annotated edition of the complete writings of Abraham Lincoln, for five years	30,000
Newberry Library, Chicago, Illinois	
Studies in midwestern culture, for five years	50,000
Libraries	
American Library Association, Chicago, Illinois	
For work of its Board on International Relations, for one and one-half years	25,000

British Museum, London, England	
Establishment of a microfilm laboratory, for sixteen months	$ 56,000
Woodrow Wilson Foundation, New York	
Cataloguing of a collection of documents of the League of Nations, for twenty-three months	31,500
Drama, Film and Radio	
Columbia University, New York	
Expenses of a training program for German radio personnel	25,000
Stevens Institute of Technology, Hoboken, New Jersey	
For expenses of the study of electronic control of sound in the theater, for fourteen months	9,600
Other Subjects	
American Council of Learned Societies, Washington, D. C.	
General support, for four years	65,000
Study of scholarly publishing in the United States, for twenty-one months	30,000
American Philosophical Association, Philadelphia, Pennsylvania	
To aid colleges and universities in defraying expenses of inviting a limited number of Latin American philosophers as visiting lecturers, for twenty-one months	30,000
Institute of International Education, New York	
For maintenance and extension of its program for facilitating international exchange of persons, for two years	100,000
Kenyon College, Gambier, Ohio	
Toward expenses of a School of English Studies, for three years	40,000
Toward the payment of writers whose work is published in *The Kenyon Review*, for five years	22,500
University of Bordeaux, France	
Development of work in the humanities, for three years	25,000
University of Lyon, France	
Development of work in the humanities, for three years	25,000
University of Toulouse, France	
Development of work in the humanities, for three years	18,000
Fellowships and Grants in Aid	
Fellowships administered by The Rockefeller Foundation: 1948	125,000

Grants in aid administered by The Rockefeller Foundation, for allocation by the officers within categories described by Trustee action and within specified limitations of amount and duration:	
1947	$ 25,000
1948	175,000
	$1,508,600

MISCELLANEOUS

American Library Association, Chicago, Illinois	
Purchase or reproductions of American scholarly journals for institutions in areas of war damage, chiefly in Europe and Asia	$ 9,000
China Medical Board, Inc., New York	
For its corporate purposes	10,000,000
European rehabilitation. Fund for allocation by the officers of The Rockefeller Foundation	200,000
General Education Board, New York	
For support of its program	1,500,000
National Research Council, Washington, D. C.	
Expenses of a joint committee on personnel problems	20,000
	$11,729,000

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